# CANALS OF THE UNITED STATES

BY FREDERIC J. HASKIN.

Internal transportation in the United States, like ancient Gaul, is divided into three parts. These are country roads and pikes, canals and natural waterways, and railroads. To the optimistic student of commercial problems each of these methods is of equal importance, and should be so regarded by a wise and benevolent government when it choses to make concessions or distribute favors. But to the majority of people the dirt roads over which the farmer must always wagon his grain or cotton, or the lumberman carry his logs, are a matter of small consideration, and the canals and rivers are of interest only to those whose territory they cross. It is the railroads that are looked upon as the steel-bound dependency when goods are to be sent, or a distant place visited.

Yet the railroad traffic of the 215,000 miles of operated roads in the United States is only twice as great per ton mile as that of the internal waterways, including the Great Lakes. The United States exports annually to foreign ports 21,000,000 tons of domestic merchandise, of a value approximating $1,200,000,000, yet this tonnage is less than the amount that goes through the Detroit River in the eight months that it is open to traffic; is hardly half as much as that carried by the Hudson River; is less than that which passes down the Mississippi Valley, and is only three times as great as that of the Monongahela, which is classed as a "slack-water" stream.

Henry Clay opposed the granting of land for the opening of the Saulte Sainte Marie Canal, because it was "beyond the pale of civilization," yet the cities of Duluth, Superior, Ishpeming, Marquette, and Ashland exist because it is a reality. It carried last year a total net tonnage of about 25,000,000. About 13,000 vessels passed through taking eastward 20,000,000 tons of wheat, 20,000,000 tons of other grain, and 500,000 tons of merchandise, including copper and lumber. During the eight months of the year that it is not ice-locked, the Soo has a traffic equal to three times that of the Suez Canal, ten times that of Manchester, and eight times that of Kiel.

It is claimed that if this system of transportation were abolished, the cities it built would immediately die, because no system of railways could handle the enormous amount of products from the forests, mines, and farms that depend upon it. Even if the railways had the necessary tracks, the price would decrease the profit and the opportunities for growth. The cost of transportation by canal is only one-third of that by railway, and in open water it is even less. It is figured that with proper canal facilities connecting the navigable inland streams the nation could save 66 per cent on the present cost of transportation. Think what such a saving would mean to the people of this couptry.

When Consul General Mason investigated the question of transportation in Germany, he declared that under ideal conditions a nation would see that its raw materials, such as coal, ores, timber, stone, cotton, grain, and crude materials, were carried by waterways, as haste was not so necessary, while the perishables, smaller packages, and passengers should be carried by railroad. He argued that the one method of transportation should supplement, not supplant, the other. The value of a farm or mine or a forest is based not only on what it will produce for its owners, but also on the cost of transporting those products, the nearness of railroads and canals figuring largely in the estimate. Hauling overland by teams costs, per ton, for one mile, 25 cents; on railroads, 7.2 cents; by canals, 2.4, and by lakes, less than a mill a mile. The Pennsylvania Railroad's charges of 17 cents per ton mile were probably the highest we have ever had.

In comparison with this, the rates by boat are ridiculously small. A train must be loaded rapidly, and often the cars are not full; a boat or ship is not so pushed for time, and invariably carries a full cargo. A ship costs one-fifth as much as a train of cars equal to its carrying capacity, it lasts longer, and its running expenses are much less. At last accounts the average cost of moving freight in the United States per ton mile was $0.522 by railway (exclusive of the cost of management, structure, &c.); by steamer on the Great Lakes it was $0.135, and on the canals a trifle more than the last, a difference that will be minimized when steam motive power is used. Boats carrying 2,500 tons go from Duluth to Buffalo in three and a half days, at a cost of $120 a day, or $0.015 per ton mile.

Foreign exports and imports equal only 5 per cent of our interstate commerce. On our 18,000 miles of navigable rivers we are carrying more than all Europe on her 80,000 miles of perfected waterways. One steamer going from Pittsburg to New Orleans by river takes a tow of thirty-two barges of coal, holding 600,000 bushels, and taking fifteen days for the trip. To do the same work it is figured that 100 freight trains of sixteen cars each would be needed, and that they would have to work all summer to deliver the coal. This is said to save in freight $160,000.

John C. Calhoun, in a famous address, said: "Let us bind the republic together; let us conquer space by a perfect system of roads and canals." The partial fulfillment of his dream is found in the long inland voyages one may make, going now from Pittsburg to Western Montana by river, a distance of 4,300 miles, equal to that from New York to St. Petersburg. From St. Louis to New York City the water route follows a course that nature first planned and man ingeniously perfected by means of artificial channels. From the Mississippi into the Illinois—which modern ingenuity has made to empty at its source instead of its mouth—through the Chicago Drainage Canal, up Lake Michigan to the Straits of Mackinaw, down Lake Huron to Detroit, across to Buffalo, thence through the Erie Canal to the Hudson and New York. What pleasure this would have given Washington, who, in the days immediately after the Revolution, got a charter for the construction of a canal from the Great Lakes to the Hudson, a dream that Gov. Clinton realized for him in 1825. Though it was hooted at and called "Clinton's Big Ditch" at first, this six-foot waterway made New York the richest State in the Union.

A recent writer has likened the canal system of the United States to a pyramid whose base is a line from Southern Texas to Northern Montana, and whose apex is Boston. From this apex vessels can go to forty States, and come in contact with 90 per cent of the wealth and the population of the United States. Only Nevada, Wyoming, Colorado, and New Mexico have been denied natural or artificial waterways, but the rest of the country has latent if not active powers in this line of development. New England utilized her waters for mill power, just as the Dutch settlers of the Middle Atlantic States, true to the inherited tendencies of their race, used them for roads to market.

Through Rhode Island, Delaware, New Jersey, Maryland, Virginia, and North Carolina, there runs an almost unbroken line of small canals that have made the commerce of those sections. From Albemarle Sound around through Georgia and Florida, the line is broken, though it brings in the important Lake Borgne Canal that is seven miles long, connecting Lakes Maurepas, Pontchartrain, and Borgne; Mississippi Sound, and the Mobile, Alabama, and Warrior Rivers. It saves vessels a sixty-mile trip.

The United States does not consider its 3,000 miles of canals by any means sufficient. Boston has at last awakened to the fact that much time is lost in skirting Cape Cod by steamer, and has devised a canal that will cut across this neck. Another that she has discussed would cut across country from Narragansett Bay to Boston, and save many more hours journey on sometimes dangerous waters. The old Chesapeake and Ohio Canal may be made to further fulfill Washington's ideas and be cut through the ridges to Pittsburg, where 16,000,000 tons of coal, iron, and merchandise already pass yearly. The proposed Lake ship canal from Pittsburg to Lake Erie would also increase the already great commercial and manufacturing interests of that city, and offer even wider possibilities for internal development. To extend the Chicago drainage canal to St. Louis would insure a deep waterway 357 miles long, protected by dams and locks that would cost $25,000,000, and which would be more than worth it.

The South, rich in mines and agricultural products, is also rich in inland waterways that need only to be knit together by canals to perfect its development. The Columbia River in Oregon, navigable for 100 miles to The Dalles, has hundreds of other miles of open waterway beyond that need only the cutting of a short canal to be made a great commercial route for the grain countries beyond. Another great project that the West is eager to see, one that would give to the nation a great harbor with unsurpassed navy yard facilities, is that of cutting a canal from Puget Sound and Elliott Bay to Lake Washington and Lake Union, which lie east of Seattle. This would secure to Seattle a water-front of many miles, with facilities for warehouse, storage, and shipping increased a hundred-fold.

**To-morrow—"Value of Uncle Sam's Birds."**

**Funeral of Mrs. Mark To-day.**

The body of Mrs. George A. Mark, sister of John Joy and Joseph R. Edson, who died at her residence, 614 S street northwest, Thursday night, will be buried from the residence of her brother, at 1324 Sixteenth street, to-day at 2 p. m. About a week ago Mrs. Mark caught a severe cold which later developed into pneumonia. While it was realized that Mrs. Mark was seriously ill, her condition was not supposed to be critical, and her death was a surprise to her relatives. One son, Leroy Mark, survives her. She was the widow of George A. Mark, for a long time employed here in the Library of Congress. Mr. Mark was a graduate of Bowdoin College and a classmate of Thomas B. Reed. Messrs. E. H. Droop, R. B. Caverly, J. K. Heyl, J. R. Thomas, Frank H. Edmonds, and George W. White are to act as pallbearers.

**Becoming Mode for the Young Miss.**


In planning gowns for a young girl several dresses of nice materials are usually desired, and a design for one very simple and pleasing is shown. The double yokes are quite a la mode, and should be made of different materials. In the wash dress a Valenciennes may form the inner yoke, while tucking and lace or embroidery may offer a pleasing contrast in the outer one. Fanciful little cuffs to be made of the same material as the yoke finish the sleeves at the elbow, or, if preferred, the deep cuff may be used to the wrist. The waist and skirt are both plaited so that a graceful fullness is assured, and the whole may be as elaborately or simply developed as desired. For the medium size 7¼ yards of 32-inch goods are needed. Cashmere, pongee, or a washing fabric may develop the dress. Sizes, 12, 14, 16 years.

A pattern of this may obtained by inclosing 10 cents in stamps and addressing Pattern Department, The Washington Herald, 734 Fifteenth street northwest, giving number (2453) and size wanted.



# THANKS TO THE WEATHER

BY JOANNA SINGLE.

It was the weather, in the first place, thought Edith, drearily, as she watched the rain beat against the window. If she and Richard had not been caught in a sudden shower to the utter ruin of her very prettiest dress, she would never have been irritable and quarreled with him about nothing at all, and she would not have expected him to take the fault upon himself, when she alone—after the weather—was to blame. And now it had rained for nearly a week and the inaction was driving her wild; she could only think, think, and vainly try to overcome her pride, and send for him.

For the thousandth time she drew from her dress his last letter, and reread it:

"Dearest: We have been friends and neighbors and sweethearts all our lives and should not let anything come between us. I love you, and if you will just send one word saying you want me, I will come at your call and forget the nothing we quarreled about. Should we let anything so childish part us? I look for a word from you. If it does not come I shall know that you really meant to break our engagement, and shall of course, not trouble you. But you couldn't have meant it, Edith?

"Fraternally yours,
"RICHARD COPELAND."

That was all, but she had sent him no word, thinking that in time he would come anyhow, and then she would let him coax her out of her anger. But he had not come, and she could not fail to respect him for refusing to be played with.

So she was very wretched and blamed her own pride and the weather. The rain beat down warmly and intermittently, and all nature expanded and throve under its moist influence. Edith looked across the fields to the south to Richard's home, which one day was to have been also hers, and saw him out in the rain on his horse, coming from the town a few miles away. How often they two had ridden about the country together! And now it was all over—he would never come back to her—unless she sent for him. Could she do it? It was early in the afternoon and she might send her little brother over with a note. She hesitated, then she went to her room and sat down to her desk. It would be a relief to write to him—even if she could not bring herself to send it to him.

"Dear Richard: Will you come to see me to-night? I was horrid, and I am very sorry. If I had not been wet and cross, I should not have thought of caring because you rode to town with Fay. Of course, you could not help her overtaking you—she always was forward.

"Forgive me and come back. You know that—I love you—always. EDITH."

She sat looking at it. Then her heart misgave her. It had been two long months since they parted, and he might no longer care for her; he might care for Fay—the neighbors had said he had been to see her. The letter was altogether too unguarded—she could not tell him she loved him. So she carelessly thrust it into her dress with the letter from him.

She tried to busy herself about the house, but somehow she could not work; she was restless, and felt as if her mother and sister saw it, and would know that she fretted for Richard. She tried to read in her own room, but it seemed like a prison.

Along about 3 o'clock she felt as if the day had been years long; she could bear it no longer. She put on some heavy shoes and an old waterproof riding habit, wound her fair hair closely under a little cap, and stood before the glass thinking what a fright she looked and rather rejoicing in the fact. What was the use of being beautiful when Richard no longer loved her?

She slipped out to the barn and saddled Ginger, her little mare, mounted and rode quickly out of the gate and northward, as she did not want to pass Richard's house. Her mother saw her ride off in the storm, and wondered if the girl was going crazy, but was too late to call after her. At first Ginger wheeled and refused to believe that she was expected to splash her dainty hoofs through such pools of mud and water, but after a few snorts of protest, Edith convinced her with the quirt that this wind and rain were really to be faced, and the little beast settled into a spiteful trot.

Edith rather rejoiced in buffeting the storm; the rain and wind cooled her hot cheeks, and the open air relieved the unbearable tension of her nervousness. For the first time since the trouble with Richard, she allowed herself the unrestrained luxury of tears. Here, out in the open, with the sting of raindrops in her face, she was free from trying eyes, she did not need to keep up her pride, and she could be as wretched as she really felt. She did not look about her, but rode mile after mile, letting the mare take her own course.

After riding an hour or so she noticed that the storm abated, and looking up saw that the clouds were less dark. Here and there was a gleam of blue, though the warm wind still blew intermittent drops into her face. She drew her collar closely about her neck and pulled her cap over her eyes and rode on with her own thoughts.

At last an idea came to her. Why not 'phone to Richard? Just call him up and talk to him in the old way about nothing in particular? And if he made it easy for her, ask him to come to see her that evening? Strong in this new resolve she looked to see where she was, and realized that after a long detour she was about a mile below Richard's house, which she must pass. She could not go back, for it was probably near evening. The sun threatened to break through the clouds near the horizon. The rain had entirely ceased. She felt tired, but happier, and quiet after the relief of tears.

Then she remembered a way through Richard's fields that they had often taken. She would have to pass a bad slough, but that could not be helped—he must not see her in her present plight. She realized that her face was swollen and her eyes red with weeping, and that she was covered with mud, her hair was flying wildly, though the dampness always made it the curlier. She turned into the pasture, after dismounting to open a heavy gate, and as she rode along she removed her cap, and, transferring her hairpins to her mouth, let the reins fall on Ginger's neck, while she shook out her long hair, and prepared to coil it more closely; but Ginger gave a sudden jerk, and in calling "Whoa!" the pins fell from her mouth into the mud and water. Then she laughed, long and heartily, and gave the wind its will and her hair. No one would see her, anyway.

As she neared the slough she felt very warm and unfastened her habit at the throat. Ginger was plunging and snorting through the mud, and stopped once with a jerk that almost threw the girl from her saddle. The wind caught at her dress and before she realized it the two luckless letters were spread out in the mud. It was no laughing matter, for Richard would be sure to find them, and the mud was so deep she could not possibly dismount. She drove Ginger as close to them as possible, and was leaning over reaching for them so attentively that she did not see Richard till he rode up almost against her.

Her eyes met his, defiantly conscious of her floating hair, and her soiled face, and, above all, the tell-tale letters. She wished her writing was finer—she could see that hateful, "I love you" from where she now was! He lifted his hat and was getting down to hand her the letters when she stopped him.

"Richard Copeland, you go right away. Don't touch them. I will get them myself."

"You can't. You'd get stuck in the mud. Let me."

"If you do, I'll—hate you."

"You do anyway, and, besides, I won't look at whatever it is you seem to value so." He coolly dismounted, but she sprang down ahead of him and snatched at them, sinking to her knees in the slush. Ginger started and Richard called "Whoa!" but gave the poor beast a sly cut with his whip that sent her on a mad gallop for home. He held Colonel by the bridle. Edith faced him.

"Now, Edith," he said, "hate me or not. You will have to get on Colonel and be taken home. Come—dear."

"I'll die here first!" He mounted, and, riding close to her, suddenly caught her in his arms and drew her struggling and angry to the saddle in front of him.

"Edith," he said, "I couldn't help seeing the 'I love you' on the letter you were so anxious about. Was it written for me?" Suddenly she felt that she could bear it no longer. She turned her face against his shoulder and cried, while he smoothed back her long hair and held her very close. Her pride was quite gone; she was in tears and a fright generally. She felt that it was positively a miracle that he could still love her. He kissed the only available place, which happened to be her left ear. Then he asked her again about the letter.

"I meant it for you," she owned, "but I couldn't send it, and I was miserable."

He laughed softly, and bade her look up, and Colonel somehow understood that he was expected to go very, very slow.



A "New Idea in American Politics" in Sunday's issue of The Washington Herald.